# Communicable Disease

Newsletter of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health

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## Why report disease?

The key to recognizing and controlling communicable diseases is prompt and accurate reporting by clinicians. Laboratory and hospital reporting are also important, but not all reportable diseases are diagnosed by laboratory criteria, and not all patients with reportable diseases get hospitalized. In addition, laboratory reports do not provide clinical and demographic information needed for disease control and prevention, planning and research. For that, we depend on the clinician. Reportable diseases in Massachusetts are specified in Reportable Diseases and Isolation and Quarantine Requirements (July 1994); please call (617) 983-6800 if you need a copy.

This article discusses why communicable disease reporting is critical to maintaining public health, how prompt reporting can benefit clinicians, and when the diagnosing physician should call the Massachusetts Department of Public Health (MDPH) even before filing a formal report. In the next issue we'll discuss how to report in detail, including which diseases are reported directly to MDPH instead of to the local board of health.

### Why report

Detect emerging disease threats. The key to recognizing new or emerging infectious diseases lies in routine surveillance. Immediate reporting by telephone of what is **not** routine—unusual manifestations of communicable diseases and circumstances involving them, including outbreaks and illnesses not included on the reportable disease list—is also critical to dealing with emerging problems. The outbreaks of Cyclospora throughout the country in 1996 were first detected by a few alert physicians and laboratory directors who called their health departments when they saw cases of this unusual pathogen. A nationwide investigation led to the implication of Guatemalan raspberries. Outbreaks like this require concerted efforts that exceed the capacity of any single physician or institution.

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## **Cyclospora** returns

As in 1996, event-associated cases of cyclosporiasis have again been reported in several states, including Massachusetts. Preliminary findings from current investigations suggest that imported raspberries are the likely vehicle of transmission for the majority of outbreaks thus far identified. The Massachusetts Department of Public Health strongly recommends washing all produce before it is eaten.

Cyclosporiasis is a gastrointestinal illness caused by Cyclospora cayetanensis and is characterized by frequent watery diarrhea, loss of appetite, nausea, low-grade fever, and other symptoms. Health care providers should request testing for Cyclospora in patients presenting with prolonged diarrheal illness with no other identified cause.

### The TB Treatment Unit

### A New England resource

Through collaborative efforts of the Division of Tuberculosis Prevention and Control and the MDPH's Lemuel Shattuck Hospital, selected tuberculosis (TB) patients may be referred for inpatient care at the Tuberculosis Treatment Unit (TTU). The TTU, an 18bed unit within Shattuck Hospital, is reserved for TB patients who do not adhere to therapy after all less restrictive measures are tried; who have medically complex problems that require inpatient care; or who may endanger the health of others in the community.

The TTU is an important component of the comprehensive TB control program. It offers a multidisciplinary team approach for patients who need extra assistance to complete therapy. In addition to traditional tuberculosis care, the unit treats other related medical and psychosocial problems. The multidisciplinary team, composed of hospital staff, state and local health department personnel, and

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## Epidemiology\_\*\_\*\_\*\_\*\_\*\_\*\_\*

## **Hepatitis A**

Hepatitis A is a highly contagious viral disease that affects the liver and can lead to varying degrees of illness. Symptoms include fever, lack of appetite, abdominal discomfort, diarrhea, dark urine and jaundice. Hepatitis A symptoms commonly last for about three to four weeks, and some people become so sick that they require hospitalization. Hepatitis A virus (HAV) is shed in the stool of an infected person. While person-to-person spread is the predominant mode of transmission for HAV, 3-8% of cases reported in the US since 1983 have been associated with suspected or confirmed foodborne or water-borne outbreaks.

A diagnosis of hepatitis A in a food worker can be a serious and disruptive event. Considering the particular circumstances, such as when the food worker was infectious, whether ready-to-eat food was handled, and the food worker's personal level of hygiene, any or all of the following control and prevention measures may need to be considered:

- administration of immune globulin (IG) to coworkers
- exclusion of coworkers for up to 4 weeks
- notification of patrons at risk through posted notices or press releases and the establishment of clinics to administer IG to those patrons.

Besides the public health risk, the effects on the food establishment can be devastating, leading to lost business and a damaged reputation. Good hygiene is critical to preventing the spread of HAV. Food workers should wash their hands often, during all phases of food preparation and especially after using the restroom. They should avoid bare hand contact with cooked and ready-to-eat foods by using physical barriers such as disposable gloves, utensils, and deli papers. They should never work while ill and should immediately report illnesses to supervisors. Additional measures include the use of IG, which is 80-90% effective in preventing illness if given within two weeks of exposure to the virus. For long lasting protection, however, hepatitis A vaccine is now available and has proven to be nearly 100% effective after 2 doses.

## Sucking the fun out of summer

### **Eastern Equine Encephalitis**

Eastern Equine Encephalitis (EEE) is a rare but dangerous viral disease. Since 1938, there have been fewer than 80 people diagnosed with EEE in Massachusetts, and half of those cases occurred that year. EEE is transmitted by a type of mosquito that breeds in swampy areas. The true reservoir of the virus is

unknown, but birds are thought likely. Symptoms appear two to ten days after infection, often starting with nonspecific flu-like symptoms progressing to high fever, stiff neck, severe head-



ache, and mental confusion. Encephalitis may follow, and many patients go into a coma within a week. There is no cure; treatment is supportive. EEE is fatal in approximately 30% of cases.

The risk of EEE is highest from late July through September, and the counties most at risk are Middlesex, Plymouth, Norfolk, Bristol, and Essex. However, there was a human case in Hampden County in 1995. The Massachusetts EEE Surveillance Program performs weekly surveillance trapping of mosquitoes to assess the risk. Although Massachusetts had no positive isolates from mosquitoes last year, EEE was identified in Rhode Island mosquitoes near the Massachusetts border. The wet conditions of the past year may increase mosquito activity this summer.

Prevention of mosquito bites remains the most important means of controlling the disease. Mosquito activity is highest during the dawn and dusk hours; if you are outside, wear long-sleeved shirts and long pants (minimize uncovered skin surfaces) and use an insect repellent containing DEET. DEET can be toxic if overused, so always follow the instructions. Do not use insect repellants or DEET products on infants, and do not apply these products to children's faces or hands. Fix holes in your screens, and make sure you don't have standing water near your house. If you follow these steps, you can keep the mosquitoes away and enjoy summer activities.



### **Family planning & STDs**

### **Focus of fall conference**

This fall's Annual Conference of the STD Division and the Prevention Training Center of New England will focus on the interrelationship between family planning and STD prevention services.

Both services provide opportunities to help clients protect their reproductive health. For many clients, preventing both pregnancy and STDs is the goal but the interaction of these two issues has become increasingly complex. For example, birth control pills may contribute to cervical changes that increase risk for acquiring chlamydia. In turn, untreated chlamydia can cause sterility.

The soon-to-be-published revised STD Treatment Guidelines, which clarify some complex issues in clinical management, will be reviewed at the conference. Since the Division recognizes the critical need for counselors to be familiar with both pregnancy and STD prevention, STD clinic staff will be required to attend the annual conference.

The conference will be a joint effort of the Prevention Training Center (the regional training arm of the Division), MDPH's Family Planning Unit, and the John Snow Research and Training Institute (the family planning trainer for New England).

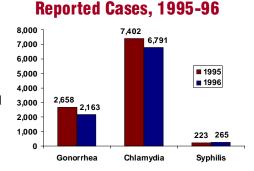
> **Increased access to** clinical care, improved clinical training, and screening services are key to preventing STDs.

### **STD** rates keep dropping

Massachusetts continues to make progress in preventing the spread of sexually transmitted diseases. Reported gonorrhea reached the lowest level since 1959. It declined 19% from 1995 to 1996,

and 71% since 1990 (7,527 reported cases). Chlamydia declined 8% from 1995 to 1996, and 45% since the peak of 12,251 cases reported in 1990.

In contrast, syphilis increased 19% from 1995 to 1996. Some of this increase is attributable to the recent extension of syphilis screen-



ing services to all county jails. Despite this small but troubling recent increase, total infectious syphilis has declined 77% since the peak of 1,173 cases in 1990.

Declining trends suggest that safer sexual behaviors are increasing. Analysis indicates that the highest risk for disease is among the urban poor, with adolescents at particular risk.

Last year, the National Institute of Medicine issued a landmark report entitled The Hidden Epidemic: Confronting STDs in America. This report emphasizes that the scope, impact and consequences of STDs receive too little recognition. For example, only

> \$1 is spent on STD prevention for every \$43 spent on STD-associated medical

Other issues cited in the report include:

- STDs have greatest impact on women, adolescents and infants
- STDs that cause inflammation or sores increase the risk of acquiring HIV
- the US spends \$10 billion on STDs (excluding AIDS) and their complications, a cost shared by all citizens via higher health insurance premiums, health care costs, and taxes

The report provides a basic framework upon which state and local STD programs can design services. The Division intends to strengthen STD prevention efforts in Massachusetts by increasing access to clinical care and improving clinical training and screening services.





## **Female condom training**

STD Division staff have developed a training program for Prevention Center staff, based on training received from the Female Health Company, manufacturer of the REALITY® female condom. Training videos produced by the manufacturer are also available for borrowing or copying by health care agencies serving women and adolescents. For more information about training or videos, please call Lorraine Peavey, RN at (617) 983-6852.

## **CONFIDENTIALLY SPEAKING**

## A system you can trust

With privacy of medical information an increasing concern, the development of the Mass achusetts Immunization Information System (MIIS) has included special safeguards for confidentiality. A major tenet of the MIIS is the promise that information supplied will remain confidential and will be shared only with the full and informed consent of parents. Parental consent will allow doctors and clinics to send immunization information to the MIIS, which could then share it with three parties: health care personnel who administer immunizations, school health personnel verifying immunization entrance requirements, and public health personnel who may contact families to encourage them to bring their children up to date. No one else will have access to the database. Any public release of information will only be in aggregate statistical form, with no identifying information.

Only authorized people can gain access to information in the MIIS database. Authorized users will be pre-enrolled and required to identify themselves to the system by unique, registered user names and passwords before the system will grant access to any data. Other security features include logs of who has connected with the system, who has accessed individual children's immunization records, and records of unsuccessful query attempts. Parents will be able to find out who has requested or obtained access to their child's record.

The systematic design to ensure confidentiality includes not only documentation of informed consent and technical means of system security described above, but also the commitment of system users. All users will be required to sign agreements which stipulate their confidentiality responsibilities in interacting with the MIIS.

The MIIS has placed the highest priority on the development of systems to maintain data in the most confidential way possible. We believe this effort will encourage parents and providers to participate and help make sure that our children are protected against serious childhood illnesses.

### Why report?

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Help stop outbreaks. Prompt reporting can both signal an outbreak and help us evaluate whether control efforts are working. For example, when surveillance data identify hepatitis A in a foodhandler, there is a potential outbreak situation. Distribution of immune globulin (IG) to potentially exposed customers, along with other follow-up measures, often prevents more cases from occurring.

#### When to Call

Under special circumstances, clinicians should call their local board of health or MDPH immediately, even before formally reporting a case by the usual means. These special circumstances fall into three general categories.

**Something unusual** (such as suspect bacterial meningitis; suspect measles; suspect rubella; suspect diphtheria; suspect viral hemorrhagic fever; suspect foodborne illness outbreak). Call right away.

Patient may have exposed others to a serious communicable disease (e.g., active tuberculosis in a school or workplace; hepatitis A in a foodhandler). The MDPH and your local board of health will work with you to determine the public health risk and take the measures necessary to limit additional morbidity.

#### Advice or information.

- Your patient is a close contact of someone with multidrug-resistant TB.
- You're worried about giving rabies postexposure prophylaxis to a pregnant woman.
- You have a question regarding public health.
- Remember, too, that up-to-date surveillance data are available on request.

Adapted with permission from the New York City Department of Health, *City Health Information*, September 1996, Vol. 15, No. 2.

## You be the epi

### **Telephone numbers for reporting**

- Sexually transmitted diseases (617) 983-6940 Division of STD Prevention
- Tuberculosis (888) 627-7682 (888-MASS-M-TB) (answering machine 24 hours/day)
  Division of TB Prevention and Control
- AIDS (617) 983-6560 Division of AIDS Surveillance
- Other communicable diseases (617) 983-6800 (staff on call 24 hours/day for emergencies)
   Division of Epidemiology and Immunization

### **STD** case reporting

Unlike most other reportable diseases, sexually transmitted diseases (STDs) are reported directly to the Division of STD Prevention. Bypassing local boards of health helps protect patient confidentiality by limiting dissemination of sensitive information. A reporting card for clinicians to use is available from the Division by calling (617) 983-6940. These cards provide the Division with the usual demographics and information about follow-up in terms of treatment and partners. However, the cards also serve another function by providing the clinician with information about treatment guidelines and an opportunity to request information or other services from the Division.

Laboratories report significant findings electronically, by fax ([617] 983-6962) to a machine located in a locked area with restricted access, or by mailing computer disks or reports.

Surveillance and epidemiologic data are used for program planning and evaluation. Data analysis tells us what kinds of services are most needed, where and by whom. Data are released only in aggregate form, in routine reports (*Annual, Women and STDs,* and *Adolescents at Risk*) and in reports customized for time, community, age group, racial/ethnic group, or gender.

A 23-year-old male from Africa arrived in the US in June 1995 on a visitor's visa. A chest x-ray taken at Immigration and Naturalization Services in December 1996 showed a cavitary lesion, yet this information was not reported to the state or local health department. In January 1997 he was admitted to a Boston hospital with symptoms and diagnosed with active TB (smear and culture positive), and the case was then reported to the local health department. When the public health nurse made a home visit, she learned that the address given was a friend's home and that the patient was currently living out of state. How would you proceed with this case investigation?

### **Analysis**

The local public health nurse case manager called the identified state health department and confirmed that the patient was currently residing there. Investigation revealed that the patient continued to travel frequently among Massachusetts, his current state of residence and a third state for employment purposes.

His case management required interstate communication and collaboration. Because his adherence to the TB treatment regimen was difficult to document, an interstate Directly Observed Therapy (DOT) plan was initiated. Contact investigations were conducted at all exposure sites and the results shared with all three state health departments.

The patient has moved several times since his treatment plan was initiated, but with cooperation among the patient, the nurses and the outreach worker staff, DOT continues on a consistent basis.

## **Empower parents**

#### **Teach them about immunizations**

Vaccine information statements (VISs) must be given to your patients, their parents or legal representatives and reviewed with them *every time* a dose of vaccine is administered. This is required under federal law (National Vaccine Injury Compensation Act of 1986). Parents and legal representatives have a right and a responsibility to make informed decisions about their children's care, including vaccines. They should have an opportunity to ask questions and should be told what to expect as a result of the vaccination. They should be encouraged to take the vaccine information statements home with them in case they want to refer to them later.

All of the standard recommended childhood vaccines now have corresponding single-page VISs developed by the Centers for Disease Control and Prevention (CDC), including the long-awaited statements on

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## Immunization

## **Survey results**

Every year the Massachusetts Immunization Program surveys all licensed group day care centers, kindergartens, seventh grades and colleges to monitor compliance with school and day care immunization requirements. This is the first time we have surveyed for hepatitis B immunization in kindergarten and seventh grade. While hepatitis B immunization is required for kindergarten entry, it is only recommended for seventh grade. Immunization levels among college students are not as high as those in school and day care children. Several colleges reported difficulty tracking immunizations.

The results of the surveys, summarized in the tables below, indicate that immunization requirements are effective in ensuring that children in licensed day care and school are well-protected against vaccine-preventable diseases. These requirements, and their enforcement, have all but eliminated outbreaks of vaccine-preventable disease in these settings.

### Kindergarten and Group Day Care Immunization Survey, 1996–97

	Enrolled	DTP <sup>1</sup>	Polio <sup>2</sup>	MMR <sup>3</sup>	Hib⁴	HepB⁵
Kindergarten	86,896	97%	98%	98%	NA	33%
Day Care	110,221	98%	98%	98%	96%	82%

### Seventh Grade MMR Survey, 1996-97

Enrolled	1 dose MMR <sup>3</sup>	2 doses measles	HepB⁵
78,598	99%	96%	30%

### **College Student Immunization Survey, 1996–97**

Enrolled	1 dose MMR <sup>3</sup>	2 doses measles	Td <sup>6</sup>
Undergraduate			
183,664	94%	91%	92%
Graduate			
31,707	90%	83%	89%
Health Science			
24,318	92%	90%	94%
TOTAL			
239,689	93%	90%	92%

<sup>&</sup>lt;sup>1</sup>DTP: Diphtheria, tetanus, pertussis vaccine, ≥4 doses

### When in doubt, vaccinate

More than 500,000 cases of pneumococcal pneumonia, and 40,000 deaths due to invasive pneumococcal disease, occur every year. This is the most common vaccine-preventable cause of death in the US. Over two-thirds of cases had previous encounters with the health care system and were not vaccinated.

The pneumococcal vaccine is safe, effective, and cost-effective. Only 30% of persons 65 years of age and older have been vaccinated, however, and studies have found vaccination rates among nursing home patients to be even lower. Low immunization rates contribute to Streptococcus pneumoniae causing outbreaks in long-term care facilities, hospitals, jails, and other institutional settings. The emergence of multidrug-resistant S. pneumoniae underscores the importance of pneumococcal vaccine use, particularly among the institutionalized elderly. Some physicians have been reluctant to vaccinate against pneumococcal disease because of difficulty in obtaining immunization records and fear of "overimmunization." The consequences of failure to vaccinate far outweigh any possible risk associated with revaccination. The incidence of serious adverse events is as low following revaccination with pneumococcal vaccine as it is following the first dose.

The risk for pneumococcal infection can be reduced by ensuring that everyone 65 years and older receives pneumococcal vaccine. To provide maximum protection of adult patients, every primary care facility and hospital should have a written comprehensive immunization policy that includes the following:

- The immunization status of all adult patients should be assessed at every primary care visit, on admission to long-term care facilities, and on discharge from acute care hospitals.
- If unable to obtain immunization records, patients should be considered not immunized.
- All unimmunized patients 65 years and older, and those of any age with medical conditions that put them at risk for complications from disease, should be immunized with pneumococcal vaccine, and with influenza vaccine during flu season. Patients without immunization records, and those for whom it has been more than ten years since their last dose, should receive Td vaccine.
- Standing orders should be in place for pneumococcal, influenza and Td vaccines.

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<sup>&</sup>lt;sup>2</sup> Polio vaccine: ≥3 doses

<sup>&</sup>lt;sup>3</sup> MMR: Measles, mumps, rubella vaccine, ≥1 dose

<sup>&</sup>lt;sup>4</sup> Hib: *Haemophilus influenzae* type b vaccine, ≥ 3 doses

<sup>&</sup>lt;sup>5</sup>HepB: hepatitis B vaccine, 3 doses

<sup>&</sup>lt;sup>6</sup>Td: Tetanus, diphtheria toxoid



## **Southeast Region Update**

### **Tuberculosis Surveillance Area (TSA) V**

The geographical boundaries of TB regions were recently changed to match those of other state agencies. Dedham, Dover, Medfield, Millis, Needham, Wellesley and Westwood are now served by TSA V, and the Blackstone Valley communities are now covered by TSA I.

**Epidemiology:** In 1996, 46 cases of TB were diagnosed in TSA V. The highest case rates were in Brockton and Quincy. There have been several cases over the last year among fishing industry workers in southeastern Massachusetts communities.

Clinical Services: Clinical services are currently provided at Brockton Hospital, Cape Cod Hospital in Hyannis, Morton Hospital in Taunton, St. Anne's Hospital in Fall River, Massachusetts Respiratory Hospital in Braintree, St. Luke's Hospital in New Bedford, and Sturdy Memorial Hospital in Attleboro. Nursing services for the follow-up of people on preventive therapy are provided by the Visiting Nursing Services of Martha's Vineyard & Community Service.

**Educational Activities:** The annual program entitled "A Regional TB Update 1997" was held in May. It gave attendees information about focusing screening activities on target populations at high risk of TB and minimizing screening of persons at low risk.

Community Outreach Activities: The Community Outreach Workers (ORW) for TSA V are Leonora Gonzalez, Eddy Bien-Aime, and Xue Zhi Sun. Leonora works primarily in the southern part of the region and speaks fluent Portuguese; Xue works part-time in the Quincy area, primarily working with the Chinese population; and Eddy works part-time in the northern part of the region (mainly the Brockton clinic area) and speaks fluent Haitian Creole.

Support services for the region are provided by Anne Bernard (TB office clerk) and Debbie Beausoleil (case register surveyor). The TSA nurse position is vacant; please call Janice Boutotte, Director of Patient Management Services, at (617) 983-6986 if you need assistance.

### **TB Treatment Unit**

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others from involved community agencies, meets every two weeks to review patient progress and discharge plans. The purpose is to ensure comprehensive public health case management.

The staff at Shattuck Hospital have expertise in the management of complex TB cases involving drug resistance, advanced disease and poor response to therapy. Management also includes diagnosis and treatment of HIV infection, substance abuse, and psychiatric illnesses, as needed.



Lemuel Shattuck Hospital, Jamaica Plain

The services offered in the TTU operate within the context of a therapeutic milieu designed to identify and work on patient behavior patterns that contribute to difficulties in completing therapy. It is based on a planned, structured and supportive environment that helps develop problemsolving skills, resolve conflicts, and allow patients to understand the effects of their behavior. Critical to the therapeutic milieu is the patient privilege system that helps build individual responsibility for behavior. Adherence to the treatment plan is rewarded, and patients may progress to outpatient care. Other therapeutic activities include unit jobs, living skills, psychotherapy, and community meetings.

Most admissions to the TTU are voluntary; however, Massachusetts law allows for compulsory admission as a last resort for those who are unwilling or unable to accept appropriate care. For more information, please call the Division of Tuberculosis Prevention and Control at (617) 983-6970.

### **Empower parents**

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Haemophilus influenzae type b (Hib) and hepatitis B vaccines. The polio vaccine VIS was recently revised to explain the latest recommendations on the sequential polio immunization schedule. Most of the VISs have been translated into several languages. Check with your local board of health or regional immunization office to obtain the most current vaccine information statements.

Immunization is safe and the most effective way to prevent serious and potentially life-threatening infections. Educate parents; it's the best way to help them keep their kids healthy.

### **CD** UPDATE

State Laboratory Institute 305 South Street Boston, MA 02130 Bulk Rate US Postage PAID Boston, MA Permit No. 55970

### When in doubt

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All three vaccines can be safely administered simultaneously, at different anatomical sites.

If you want more information or copies of the guidelines, Vaccine Information Statements or sample standing orders, call the Massachusetts Immunization Program at (617) 983-6800.

#### Communicable Disease UPDATE

is a free quarterly publication of the Bureau of Communicable Disease Control, Massachusetts Department of Public Health. David H. Mulligan, Commissioner

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## Save the dates

## MDPH Teleconference Series on Infectious Disease

July—Gram Positive Organisms: Susceptibility Testing

September—Respiratory Illness
Pertussis: Diagnosis & Surveillance

November—TB Rapid Diagnostics: Practical or Not?

Preregistration required, \$25 fee, CEUs available. You will need a speaker phone.

For more information, call the National Laboratory Training Network, New England Office at (617) 983-6284 or (800) 536-NLTN (within New England).

### **TB Regional Update-Northeast**

September 18, 8:45 AM-12:30 PM Salem Hospital Auditorium For information or to register, please call (508) 851-7261 or (617) 727-7908.

### **CDC Satellite Training Courses**

#### Immunization Update

September 11, three broadcasts: 8–10:30 A.M., 11–1:30 & 2–4:30 P.M.

### Surveillance of Vaccine-Preventable Diseases

December 4, same times as above

For more information call Jean Franzini, RN, at (617) 983-6800

## Public Health Training Network Satellite Course

## Medical Management of Biological Casualties

September 16, 18 & 19, 12–4:30 P.M. For more information call Allison Hackbarth at (617) 983-6800.

### **Annual STD Conference**

November 20, 1997 For more information, call the PTC at (627) 983-6945.

### **CD Update on-line**

The MDPH web site now includes previous editions of this newsletter, which you can view by using the Adobe Acrobat Reader (free from http://www.adobe.com/prodindex/acrobat/main.html). The MDPH home-page address is:

http://www.magnet.state.ma.us/dph/

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